REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1.   In the specification

The specification is amended, as shown in the foregoing AMENDMENT TO THE SPECIFICATION, and in the SUBSTITUE SPECIFICATION to correct informalities pointed out in the Office action and found upon further review. It is respectfully submitted that no new matter is added, as the changes simply correct minor informalities.

Entry of the AMENDMENT TO THE SPECIFICATION and the SUBSTITUTE SPECIFICATION is respectfully requested in the next Office communication.

2.   In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

A.   Claim amendments

Claims 1-7, 11-14, 17, 19-27 are amended to correct minor informalities and to ensure proper antecedent basis for each recited feature. It is respectfully submitted that no new matter is added by way of the amendments, since the changes merely correct minor informalities.

Claims 8-10, 15, 16, 18, 28, and 29 are left unchanged.

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

B.   Rejection of claims 1-29 under 35 U.S.C. § 112 second paragraph

Reconsideration of this rejection is respectfully requested.

The applicant disagrees with the assertion in the Office action that the claims are narrative in form and are a literal translation into the English language from a foreign document. However, all attempts have been made to address any apparent antecedent basis problems or other confusing recitations.

If the Office maintains this rejection, the applicant respectfully requests that the next Office action identify specific passages or recitations that are deemed insufficient under 35 U.S.C. § 112 second paragraph.

In view of the amendments to the claims, it is respectfully submitted that every claim is clear and definite, and withdrawal of this rejection is respectfully requested.

3.   Rejection of claims 1, 3-11, and 13-29 under 35 U.S.C. § 102(a) and 102(e) as being anticipated by U.S. patent no. 7,146,009 (*Andivahis et al.*)

Reconsideration of this rejection is respectfully requested, on the basis that the *Andivahis* patent fails to disclose each and every recited feature of claims 1, 3, 11, 13, 19, 23, 24, 25, 26, and 27. The remaining claims depend from one or more of claims 1, 3, 11, 13, 19, 25, 26, and 27, and are therefore patentable as containing all of the recited elements of claims 1, 3, 11, 13, 19, 25, 26, or 27, as well as for their respective recited features.

By way of review, each of independent claims 1, 3, 11, 13, 19, 23, 25, 26, and 27 require, at least in part, at least first and second signals that respectively include first and second substitute values (representative of the entire data set/message to be transmitted), which are obtained by transforming the data to be transmitted by using various recited conversation constants and pattern-conversion constants.

In this way, the sender sends at least two signals that are eventually received by the receiver, and each signal includes the entire data set/message as represented by the first or second substitute value, along with selected conversation constants and pattern-conversion constants.

The receiver then decrypts each of the first and second substitute values received in the signals to obtain two decoded data sets. The receiver then compares

these two decoded data sets, and when the decoded data sets match, the receiver then knows that the transmitted data set/message is authentic.

The *Andivahis* patent fails to disclose such a system. In particular, the *Andivahis* patent fails to disclose transforming a data set/message into first and second substitute values, as is required by claims 1, 3, 11, 13, 19, 23, 25, 26, and 27.

The *Andivahis* patent instead discloses a system where a single composite message C1 (including an encrypted message Me, a split key fragment Kse1, and key retrieval information Kr) is transmitted from the sender to the receiver (col. 6, lines 3-7, 12-13). Alternatively, the encrypted message Me can be sent separately from the remaining data (col. 6, lines 14-16).

While the *Andivahis* patent does disclose splitting a key Kse into a first split-key fragment Kse1 and second split-key fragment Kse2, there is simply no disclosure of creating first and second substitute values for the data set/message to be transmitted, each one representative of the entire data set/message to be transmitted. Instead, a single composite message C1, or the single encrypted message Me, and remaining data, are sent.

Even if the encrypted message Me is sent separately from the remaining data, the remaining data is not a second substitute value representative of the message to be sent.

Thus, it can be seen that the *Andivahis* patent fails to disclose transforming a data set/message into first and second substitute values, as is required by claims 1, 3, 11, 13, 19, 23, 25, 26, and 27. Accordingly, withdrawal of this rejection with respect to claims 1, 3, 11, 13, 19, 23, 25, 26, and 27 is respectfully requested.

As mentioned above, applicant submits that independent claims 1, 3, 11, 13, 19, 23, 25, 26, and 27 are patentable and therefore, claims 4-10, 12, 14-18, 20-22, 28, and 29, which depend from various claims 1, 3, 11, 13, 19, 23, 25, 26, and 27, are also considered to be patentable as containing all of the features of various claims 1, 3, 11, 13, 19, 23, 25, 26, and 27, as well as for their respective recited features.

With regard to claim 24, it is respectfully submitted that the *Andivahis* patent fails to disclose a signal generating process involving converting pattern-conversion constants contained in a received signal into conversion constants to convert the received signal, and transferring the converted signal.

The Office action identifies the key server 240, 340, 440 of the *Andivahis* patent as corresponding to the apparatus that transfers a signal as recited in claim 24.

However, as noted above, the apparatus recited in claim 24 includes a signal generating process involving converting pattern-conversion constants contained in a received signal into conversion constants to convert the received signal, and transferring the converted signal.

The key server 240, 340, 440 of the *Andivahis* patent does not accomplish these recited features of claim 24. In particular, the key server 240, 340, 440 of the *Andivahis* patent merely creates, stores, and sends encryption keys and decryption keys (possibly split into two parts) (col. 2, lines 5-8, 30-45).

The *Andivahis* patent does not disclose that the key server includes a signal generating process involving converting pattern-conversion constants contained in a received signal into conversion constants to convert the received signal, and transferring the converted signal, as is required by claim 24.

Accordingly, withdrawal of this rejection is respectfully requested.

4.   Rejection of claims 2, 7-9, 12, 17, and 18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 7,146,009 (*Andivahis et al.*) in view of U.S. publication no. 2003/0074413 (*Nielsen et al.*)

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 2 and 12, from which claims 7-9, 17 and 18 respectively depend.

Each of claims 2 and 12 recite at least in part, at least first and second signals that respectively include first and second substitute values (representative of the entire data set/message to be transmitted), which are obtained by transforming the data to be transmitted by using various recited conversation constants and pattern-conversion

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constants, as discussed above in detail with respect to claims 1, 3, 11, 13, 19, 23, 25, 26, and 27.

The deficiencies of the *Andivahis* patent with respect to these recited features are also discussed above in detail with respect to claims 1, 3, 11, 13, 19, 23, 25, 26, and 27.

The *Nielsen* publication is provided to show a second relay (intermediary), and is drawn to a routing protocol for exchanging messages between an initial sender and an ultimate receiver (abstract; paragraphs [0015]-[0017]).

However, the *Nielsen* publication fails to disclose at least first and second signals that respectively include first and second substitute values (representative of the entire data set/message to be transmitted), which are obtained by transforming the data to be transmitted by using various recited conversation constants and pattern-conversion constants, as is required by claims 2 and 12.

Therefore, since neither the *Andivahis* patent nor the *Nielsen* publication disclose at least first and second signals that respectively include first and second substitute values (representative of the entire data set/message to be transmitted), which are obtained by transforming the data to be transmitted by using various recited conversation constants and pattern-conversion constants, the proposed combination of the *Andivahis* patent and the *Nielsen* publication must also fail to disclose this feature, which is required by claims 2 and 12.

Accordingly, a *prima facie* case of obviousness cannot be established with respect to claims 2 and 12, from which claims 7-9, 17 and 18 respectively depend. Therefore, withdrawal of this rejection is respectfully requested.

5.   Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

Please charge any additional fees required or credit any overpayments in connection with this paper to Deposit Account No. 02-0200.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicant's attorney, the examiner is invited to contact the undersigned at the numbers shown below.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500
Facsimile: (703) 683-1080

Date: December 8, 2009

Respectfully submitted,

/Patrick M. Buechner/

PATRICK M. BUECHNER
Registration No. 57,504
for
GEORGE A. LOUD
Attorney for Applicant
Registration No. 25,814